

Application No. 10/687,066
Filed: October 16, 2003
TC Art Unit: 2636
Confirmation No.: 8904

THE CLAIMS

1. (Previously presented) A pressure indicator comprising:
 - a housing having first and second ends, said housing having a transparent portion at the second end of said housing;
 - a base having first and second ends, said base having an opening defining a passage therethrough, said second end of said base being mounted to said first end of said housing;
 - first and second magnetic members rotatably mounted within said housing, said second magnetic member having first and second portions with first and second different visual characteristics respectively;
 - a pressure to linear motion translator coupled to said first magnetic member and operative to produce linear motion responsive to variations in pressure so as to produce rotational movement of the first magnetic member in response to variations in pressure in communication with said translator through said passage;
 - in response to pressure below a first predetermined value applied to said translator through said passage, said first magnetic member being rotatable generally into a first actuator orientation and, in response to pressure above a second predetermined value applied to said translator through said passage, said first magnetic member being rotatable generally into a second different actuator orientation;
 - said second magnetic member being magnetically responsive to said first magnetic member being in said first actuator orientation to rotate into a first indicator orientation in which said first visual characteristic is viewable through said transparent portion and second magnetic member being magnetically responsive to said first magnetic member being in said second actuator orientation to

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rotate into a second indicator orientation in which said second visual characteristic is viewable through said transparent portion.

2. (Original) The pressure indicator of claim 1 wherein said pressure to linear motion translator comprises a flexible diaphragm.

3. (Original) The pressure indicator of claim 2 wherein said diaphragm is captively retained by said base and said housing.

4. (Original) The pressure indicator of claim 2 further including a linkage arm mechanically coupling said diaphragm to said first magnetic member.

5. (Original) The pressure indicator of claim 1 wherein said second magnetic member comprises a sphere.

6. (Original) The pressure indicator of claim 1 wherein said second magnetic member comprises a disk.

7. (Original) The pressure indicator of claim 1 wherein said second magnetic member comprises a cylinder.

8. (Previously presented) The pressure indicator of claim 1 wherein said transparent portion of said housing comprises a polycarbonate material.

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9. (Original) The pressure indicator of claim 1 wherein said housing comprises a housing body and said transparent portion, wherein said transparent portion is mounted to said housing body to form said housing.

10. (Original) The pressure indicator of claim 1 wherein said first magnetic member comprises a disk.

11. (Original) The pressure indicator of claim 1 wherein said first end of said base includes interior female threads sized to receive cooperative male threads of a tire valve stem.

12. (Original) A pressure indicator configured for mounting to a valve stem having a male threaded portion, said pressure indicator comprising:

a housing having first and second ends, said second end of said housing having a transparent portion, said housing defining a cavity;

a base having a first end and a second end, said first end having a female threaded portion for mating with said male threaded portion of said valve stem, said base including at least one opening defining a passage between said first end and said second end of said base;

a flexible diaphragm having first and second sides, said diaphragm mounted within said cavity and forming a seal at the first end of said housing, said diaphragm being deformable in response to pressure communicated to said first side of said diaphragm through said at least one opening;

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first and second magnetic members, said first magnetic member being rotatably mounted in said cavity in said first end of said housing and said second magnetic member being rotatably mounted adjacent said first magnetic member and in said cavity in said second end of said housing, said first and second magnetic members each having north and south poles and corresponding first and second portions of the respective magnetic members, wherein one of said first and second portions of said second magnetic member has a first visual characteristic and the other one of said first and second portions of said second magnetic member has a second different visual characteristic;

said first magnetic member being mechanically coupled to said diaphragm and rotatable in response to deformation of said diaphragm caused by variations in pressure such that one of said north and south poles of said first magnetic member is generally adjacent said second magnetic member when said pressure is below a first predetermined value and the other one of said north and south poles of said first magnetic member is generally adjacent said second magnetic member when said pressure is above a second predetermined value;

said second magnetic member being magnetically cooperative and rotatable with respect to said first magnetic member such that said first visual characteristic is viewable through said transparent portion of said housing when said pressure is below said first predetermined value and said second visual characteristic is viewable through said transparent portion when said pressure is above said second predetermined value.